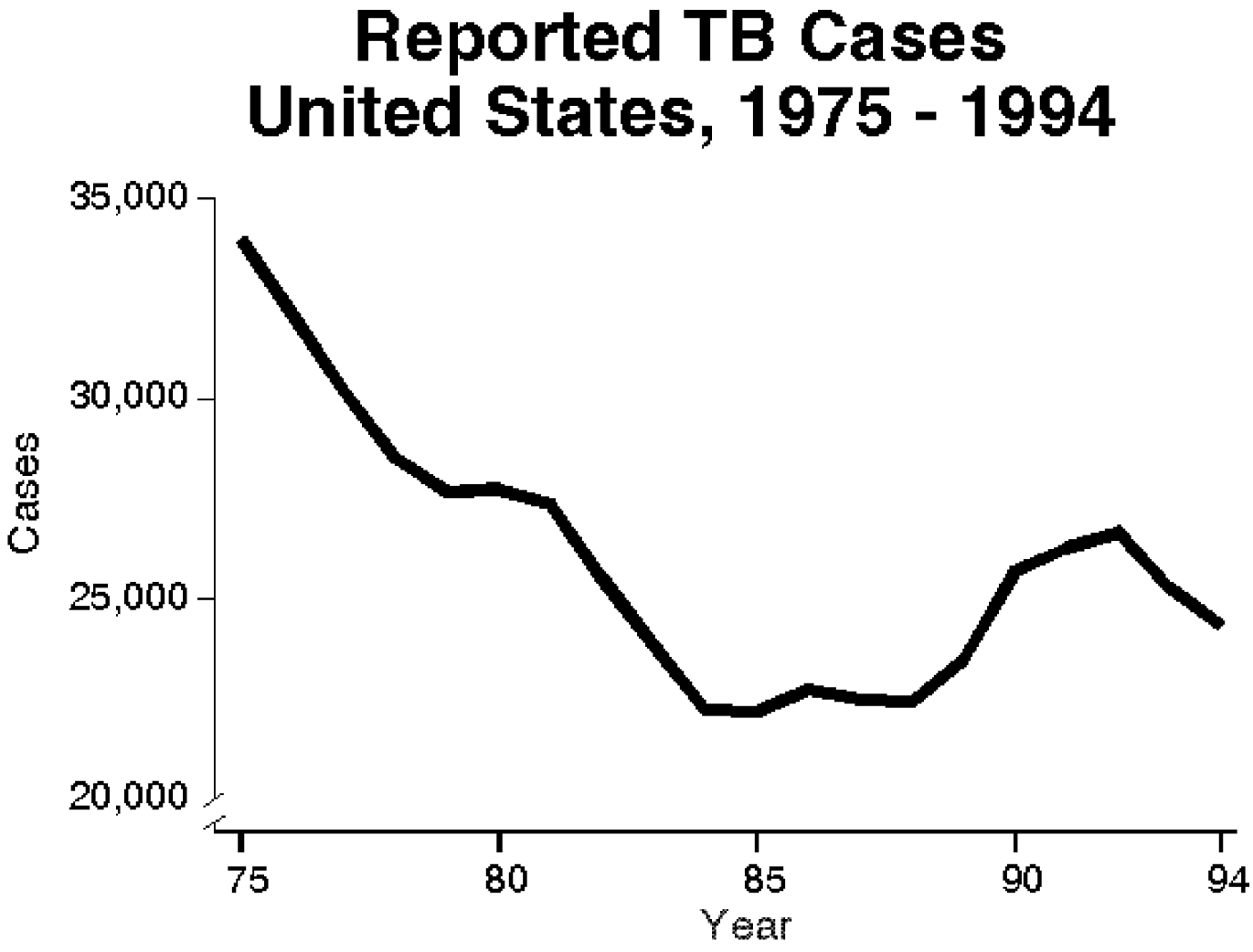
CENTERS FOR DISEASE CONTROL AND PREVENTION

TUBERCULOSIS INFORMATION

Tuberculosis Morbidity — United States, 1994

(Adapted from MMWR 1995;44:387–89, 395.)

In 1994, a total of 24,361 cases of tuberculosis (TB) (9.4 cases per 100,000 population) were reported to CDC from the 50 states, the District of Columbia, and New York City, a 3.7% decrease from 1993 (25,287 cases [9.8 cases per 100,000]) (1). However, the number of cases reported in 1994 was a 9.7% increase over 1985 (22,201 cases) (Figure 1), the year with the lowest number of reported TB cases since national reporting began in 1953. This report summarizes TB surveillance data for 1994 and compares the findings with 1992 and 1993.



During 1994, a total of 27 states reported fewer TB cases than in 1993; in comparison, during 1993, 31 states reported fewer cases than in 1992 (Table 1). Sixteen states reported fewer cases in both 1993 and 1994 than in 1992 and 1993. Six states reported an increased number of cases in both 1993 and 1994 than in 1992 and 1993 (Table 1).

During 1994, TB cases reported among persons born outside the United States and its territories (i.e., foreign-born persons) accounted for 31.9% (7627 of 23,905) of total reported cases (excludes 456 persons with unknown country of origin), compared with 29.6% (7354 of

24,818) of reported cases in 1993 (excludes 469 persons with unknown country of origin). Compared with 1993, in 1994 the number of reported cases among persons born in the United States decreased by 6.8%, and the number of cases among foreign-born persons increased by 3.7%. The number of cases occurring in U.S.-born persons decreased in all age groups except for children aged <15 years; in this age group, the number of cases in 1994 increased 0.4%. In comparison, the number of reported cases among foreign-born persons increased in all age groups except for children aged <15 years; in this age group, the number of cases decreased by 7.5% in 1994. The country of origin was known for 7483 (98.1%) foreign-born persons with cases reported in 1994; six countries (Haiti, India, Mexico, People's Republic of China, Philippines, and Vietnam) accounted for 64.8% of these cases. However, these countries accounted for only 35.2% of the foreign-born population in the United States in 1990 (2). Of the 4907 foreign-born persons reported in 1994 whose records contained information on month and year of immigration, TB was diagnosed in 1474 (30.0%) <1 year after entering the United States.

TABLE 1. Reported tuberculosis cases and percentage change, by state and year — United States, 1992–1994

State	No. Cases			% Change	
	1992	1993	1994	1992–93	1993–94
Alabama	418	487	433	+6.5	–11.9
Alaska	57	57	93	0	+63.2
Arizona	259	231	249	–10.8	+7.8
Arkansas	257	209	264	–18.7	+26.3
California	5382	5170	4859	–3.9	–6.0
Colorado	104	104	94	0	–9.6
Connecticut	156	155	148	–0.6	–4.5
Delaware	55	66	57	+20.0	–13.6
District of Columbia	146	161	121	+10.3	–24.8
Florida	1707	1655	1762	–3.0	+6.5
Georgia	893	812	740	–9.1	–8.9
Hawaii	273	251	247	–8.1	–1.6
Idaho	26	11	13	–57.7	+18.2
Illinois	1270	1237	1117	–2.6	–9.7
Indiana	247	248	211	+0.4	–14.9
Iowa	49	59	66	+20.4	+11.9
Kansas	56	80	84	+42.9	+5.0
Kentucky	402	404	347	+0.5	–14.1
Louisiana	373	367	433	–1.6	+18.0
Maine	24	28	35	+16.7	+25.0
Maryland	442	417	363	–5.7	–13.0
Massachusetts	428	370	329	–13.6	–11.1
Michigan	495	480	462	–3.0	–3.8
Minnesota	165	144	140	–12.7	–2.8
Mississippi	281	279	278	–0.7	–0.4
Missouri	245	257	260	+4.9	+1.2
Montana	16	22	24	+37.5	+9.1
Nebraska	28	23	22	–17.9	–4.6
Nevada	99	99	126	0	+27.3

New Hampshire	18	26	17	+44.4	–34.6
New Jersey	984	912	855	–7.3	–6.3
New Mexico	88	74	81	–15.9	+9.5
New York	4574	3953	3636	–13.6	–8.0
North Carolina	604	594	566	–1.7	–4.7
North Dakota	11	7	10	–36.4	+42.9
Ohio	358	315	337	–12.0	+7.0
Oklahoma	216	209	261	–3.2	+24.9
Oregon	145	154	165	+6.2	+7.1
Pennsylvania	758	749	621	–1.2	–17.1
Rhode Island	54	64	56	+18.5	–12.5
South Carolina	387	401	387	+3.6	–3.5
South Dakota	32	16	28	–50.0	+75.0
Tennessee	527	556	520	+5.5	–6.5
Texas	2510	2396	2542	–4.5	+6.1
Utah	78	46	55	–41.0	+19.6
Vermont	7	7	10	0	+42.9
Virginia	457	458	372	+0.2	–18.9
Washington	306	285	264	–6.9	–7.4
West Virginia	92	75	80	–18.5	+6.7
Wisconsin	106	100	109	–5.7	+9.0
Wyoming	8	7	12	–12.5	+71.4
Total	26673	25287	24361	–5.2	–3.7

Beginning in January 1993, TB surveillance was expanded to collect additional information concerning each case, including results of human immunodeficiency virus (HIV)-antibody testing, occupation, history of substance abuse, homelessness, residence in a correctional or long-term–care facility, initial antituberculosis drug therapy and results of drug-susceptibility testing (3). Selected characteristics were analyzed for cases in reporting areas where ≥75% of records contained information for 1994. Based on information from 51 of the reporting areas, 53.7% of cases had been prescribed the initial four-drug regimen recommended by the American Thoracic Society and CDC (isoniazid [INH], rifampin [RIF], pyrazinamide [PZA], and either ethambutol or streptomycin) (4); 22.4% of patients had been prescribed INH, RIF, and PZA; 6.8% of patients had been prescribed INH and RIF. In ≤25 reporting areas, use of illegal drugs and alcohol among patients ranged from 3.3% for injecting drugs to 15.9% for alcohol. In 31 reporting areas, 64.9% of patients were unemployed. In 40 reporting areas, 5.7% of persons were homeless; in 50 reporting areas, 4.6% resided in correctional institutions, and in 48 reporting areas, 6.0% resided in long-term–care facilities. HIV-test results were available for 36.4% of all patients aged 25–44 years; however, only nine areas reported this information for ³75% of records.

Drug-susceptibility results for Mycobacterium tuberculosis isolates were reported for 81.7% of persons with culture-positive TB in 1994. For 28 states, drug-susceptibility results were available for ≥75% of cases; 8.0% of cases were resistant to at least isoniazid (INH), and 2.2% were resistant to at least INH and rifampin (RIF). The 28 states reporting drug-susceptibility results accounted for 64% of the culture-positive cases reported in 1994 and included 12 states in which the reported prevalence of INH and RIF resistance was ≥1% in 1993 (1) or in the previous national survey in 1991 (5).

Reported by: Div of Tuberculosis Elimination, National Center for Prevention Svcs, CDC.

Editorial Note: From 1985 through 1992, the number of TB cases reported annually in the United States increased 20%, from 22,201 to 26,673 (6). Factors that have been associated with the resurgence of TB have included the HIV/acquired immunodeficiency syndrome (AIDS) epidemic; immigration of persons from countries where TB incidence rates are 10–30 times higher than in the United States; transmission of TB among persons residing in congregate settings such as hospitals, prisons, and homeless shelters; and declines in resources for TB control (6). From 1992 through 1994, the number of TB cases reported annually decreased 8.7%, in part reflecting the impact of federal resources to assist state and local TB-control efforts, including directly observed therapy (DOT), tuberculin screening and preventive therapy for persons at high risk for TB infection, and support for programs to prevent TB among HIV-infected persons.

Although the expansion of the TB surveillance system in 1993 was implemented to enable more complete characterization of TB morbidity in specific risk groups, reporting has been incomplete for some factors. For example, in 1994, only 28 states reported results of drug-susceptibility testing for ≥75% of cases, and information about HIV infection was provided for only approximately one third of case reports. To measure accurately the proportion of TB cases attributable to HIV infection and to ensure the optimal provision of services to HIV-infected persons with TB infection and disease, the Advisory Committee for the Elimination of Tuberculosis has recommended that all patients in whom TB has been diagnosed should be offered counseling and HIV testing and that all HIV-infected persons, with or without AIDS, should be given a tuberculin skin test (7). Collaborative efforts involving state and local TB and HIV/AIDS surveillance programs are needed to establish guidelines to preserve confidentiality to ensure that HIV-test results for reported TB cases are shared between programs and that this information is reported to CDC to aid in characterizing TB morbidity in these and other risk groups.

In 1994, the number and proportion of foreign-born persons with TB increased substantially; approximately one third of these persons were in the United States <1 year before diagnosis. Detection and treatment of TB among immigrants and refugees requires improved screening efforts and prompt reporting to state and local public health authorities. Local TB- control programs may need to ensure appropriate testing, prophylaxis, and treatment for immigrants and refugees from countries where TB incidence rates are high (8).

Maintaining the decline in TB morbidity and reaching the goal of eliminating TB in the United States will require sustained prevention and control efforts—especially rapid diagnosis and ensured completion of treatment (e.g., DOT), and prompt and complete reporting. Implementation of recommended infection-control measures in hospitals can prevent nosocomial transmission of M. tuberculosis (9). In addition, tuberculin screening programs that target persons at highest risk (especially close contacts of persons with active cases) ensure the most effective use of limited resources and appropriate use of preventive therapy.

References

1. CDC. Reported tuberculosis in the United States, 1993. Atlanta: US Department of Health and Human Services, Public Health Service, CDC, 1994.
2. Bureau of the Census. 1990 census population: the foreign-born population in the United States. Washington, DC: US Department of Commerce, Economics and Statistical Administration, 1993.
3. CDC. Expanded tuberculosis surveillance and tuberculosis morbidity—United States, 1993. MMWR 1994;43:361–6.
4. CDC. Initial therapy for tuberculosis in the era of multidrug resistance: recommendations of the Advisory Council for the Elimination of Tuberculosis. MMWR

1993;42(no. RR-7):1–8.
5. Bloch AB, Cauthen GM, Onorato IM, et al. Nationwide survey of drug-resistant tuberculosis in the United States. JAMA 1994;271:665–71.
6. Cantwell MF, Snider DE, Cauthen GM, Onorato IM. Epidemiology of tuberculosis in the United States, 1985 through 1992. JAMA 1994;272:535–9.
7. CDC. Tuberculosis and human immunodeficiency virus infection: recommendations of the Advisory Committee for the Elimination of Tuberculosis (ACET). MMWR 1989;38:236–8,243–50.
8. McKenna MT, McCray E, Onorato I. The epidemiology of tuberculosis among foreign-born persons in the United States, 1986–1993. N Engl J Med 1995;332:1071–6.
9. Wenger PN, Otten J, Breeden A, Orfas D, Beck-Sague CM, Jarvis WR. Control of nosocomial transmission of multidrug-resistant Mycobacterium tuberculosis among healthcare workers and HIV-infected patients. Lancet 1995;345:235–40.

PUBLIC COMMENT - TUBERCULOSIS FAX SYSTEM

CENTERS FOR DISEASE CONTROL AND PREVENTION

For a limited time CDC is accepting public comment on the information services you used. We are particularly interested in the areas listed below. If you wish to comment, you may:

FAX this sheet with your comments to: CDC-VIS/FAX (404) 639-1733, or

Mail to: CDC, IRMO MS C-15, 1600 Clifton Road, N.E., Atlanta, GA 30333

1. You are
   ____ health care professional
   ____ other

2. Fax sheet(s) you received:
   ____ Tuberculosis (TB): General Information
   ____ TB Infection vs. TB Disease
   ____ Diagnosis of TB Infection (Tuberculin Skin Test) and TB Disease
   ____ Treatment of TB Infection (Preventive Therapy)
   ____ Treatment of TB Disease
   ____ Management of Persons Exposed to Multidrug-Resistant TB
   ____ BCG Vaccine
   ____ Infection Control
   ____ Screening for TB
   ____ TB Morbidity in the United States
   ____ Tuberculosis Educational Materials Order Form

3. Reason you requested fax sheet:
   ____ for general information on topic
   ____ to answer specific question

   If you had a specific question, please describe it:

4. The information met your needs.
   ____ yes
   ____ no
   ____ partially

   If you answered no or partially, please describe your unmet needs:

5. Suggestions for additional information sheets or for improving the system: